

Szegő measures and vibration of Krein strings

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We give a dynamical characterization of Szegő measures on the real line. Szegő condition for a measure $\mu = w dx + \mu_s$,

$$\int_{\mathbb{R}} \frac{\log w(x)}{1+x^2} dx > -\infty,$$

is proved to be equivalent to a stable propagation of waves on an associated Krein string. Related results in scattering theory of Dirac operators will be also discussed. Joint work with Sergey Denisov (University of Wisconsin-Madison).

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